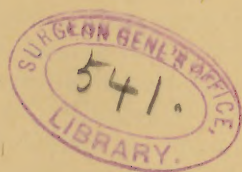
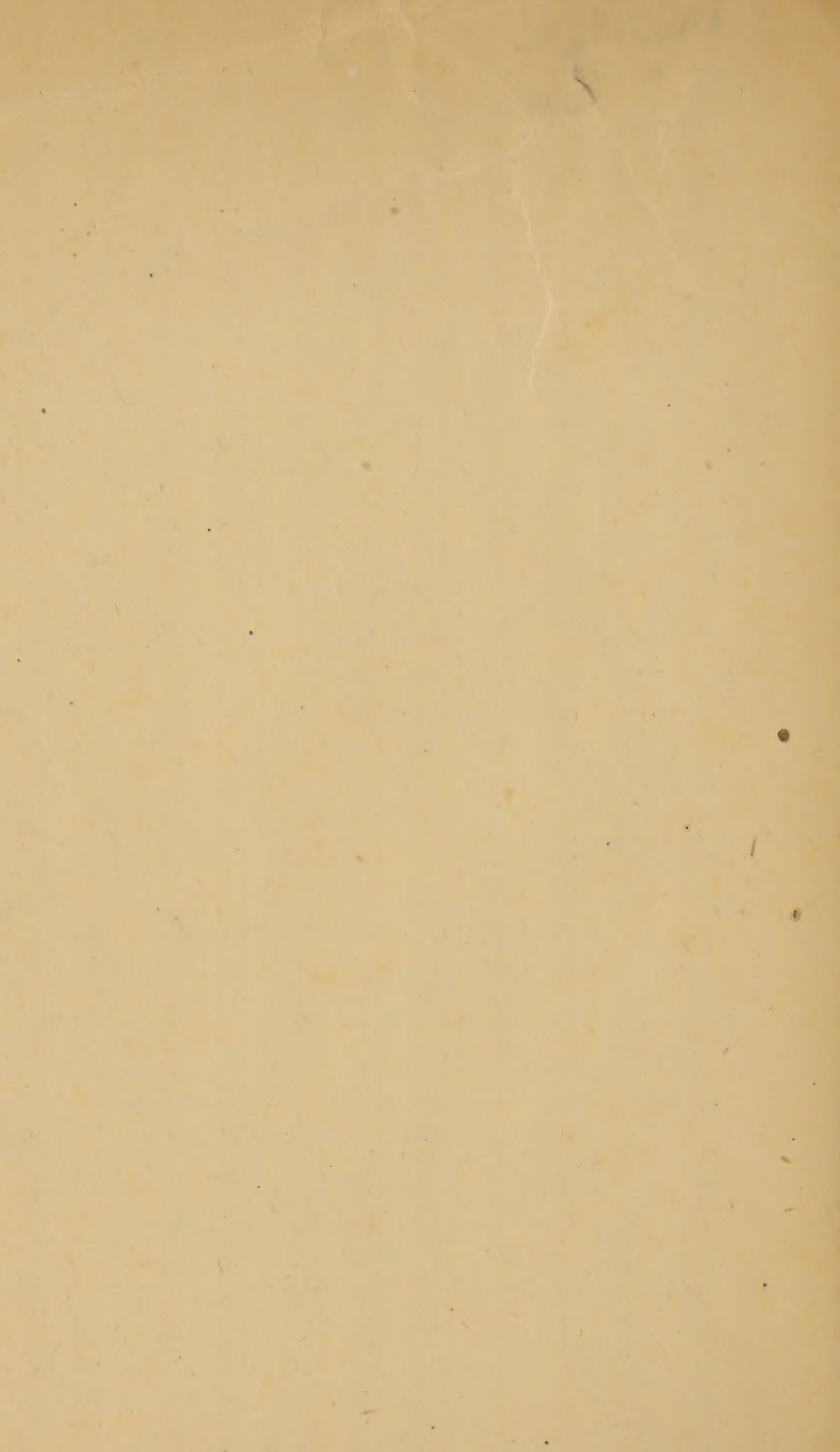


RANDOLPH (N. A.)

On the behavior of
petrolatum in the digestive tract.





ON THE BEHAVIOR OF PETROLATUM IN THE DIGESTIVE TRACT.

BY N. A. RANDOLPH, M. D.

The mixture of hydrocarbons, recognized by the pharmacist under the name of petrolatum, and popularly used under the commercial names of cosmoline or vaseline, presents on superficial inspection few points of difference from some of the organic fats of the same consistency. Close examination reveals differences, both in physical properties and in chemical constitution, between the bodies just compared. One point of difference, which I have as yet been unable to find recorded, lies in the respective behavior of these two groups, when in contact with the absorbent surfaces of the digestive tract. Thus, while the organic fats, as ordinarily taken in food, are readily and almost completely absorbed, this soft paraffin is entirely rejected, and found unchanged in the feces.

During eight days, I took daily one-half ounce of commercial vaseline, in addition to my regular diet. Digestion was in no wise altered, and no appreciable results ensued. Later, two healthy adults each received, in the course of forty-eight hours, one ounce of vaseline. Their alvine dejections for three days from the beginning of this observation were collected and dried, and, at the suggestion of Dr. John Marshall, of the University of Pennsylvania, extracted with petroleum ether. Making a slight allowance for incompleteness in extraction, the vaseline ingested was, in each case, recovered in its totality, showing that it had passed through the economy unchanged and unabsorbed.

There are some important medical applications of these facts, the discussion of which would be out of place here, and which I reserve for further experiment; but the following deductions appear permissible, and are of strictly biological interest.

I. Pure petrolatum, while entirely unirritating to the digestive tract, is valueless as a food-stuff.

II. The results of the experiments here described lend support to the theory that oleaginous matters are dependent, for their absorption, not upon mechanical, but upon vital activities, and that in such absorption the selective power of the protoplasm of the intestinal epithelium is manifested.



